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cont incorporated into a plant cell chromosome to obtain a selected tissue; and

regenerating a plant from said selected tissue on a plant-regenerating medium.

[Please add the following new claims:]

--18. (New) A method for transforming a tissue of a monocot plant comprising:

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i) culturing an explant of a tissue of a monocot plant on a medium that induces dedifferentiation of the cells of the explanted tissue for a period of 1 to 6 days, to obtain a dedifferentiating or dedifferentiated cultured tissue;

ii) contacting the dedifferentiating or dedifferentiated cultured tissue with cells of *Agrobacterium* bacteria that in turn comprise a vector comprising at least one virulence gene of a Ti plasmid, a left T-DNA border, a right T-DNA border and a polynucleotide of interest located between the left T-DNA border and the right T-DNA border;
thereby obtaining a transformed plant tissue.

19. (New) The method of claim 18, wherein the at least one virulence gene is at least the *VirB* and *VirG* genes.

20. (New) The method of claim 18, wherein the tissue is an immature tissue.

21. (New) The method of claim 20, wherein the immature

tissue is an immature embryo tissue.

22. (New) The method of claim 18, in which the vector is a super binary vector that comprises at least one virulence gene from the Ti plasmid pTiBo542 of *Agrobacterium tumefaciens* A281.

23. (New) The method of any one of claims 18-21, wherein the plant is one from the family *Gramineae*.

24. (New) The method of any one of claims 18-21 wherein the plant is a rice plant.

25. (New) The method of any one of claims 18-21 wherein the *Agrobacterium* is *Agrobacterium tumefaciens*.

26. (New) The method of any one of claims 18-21, wherein the bacteria are present in an amount of 10^6 to 10^{11} cells/ml.

27. (New) The method of any one of claims 18-21, further comprising

iii) maintaining the transformed plant tissue in the dedifferentiation-inducing medium and selecting a transformed cell or a transformed tissue.

28. (New) The method of any one of claims 18-22, further comprising

iii) regenerating a normal plant comprising the

polynucleotide of interest.

29. (New) The method of any one of claims 18-21, wherein the contacting step ii) is performed in a liquid medium for 3 to 10 minutes, and then the culture is maintained on a solid medium.

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cont 30. (New) The method of any one of claims 18-21, wherein the at least one virulence gene is at least one virulence gene from the plasmid pTOK162.

31. (New) A method for transforming a tissue of a monocot plant comprising:

i) culturing an explant of an immature tissue of a monocot plant on a medium that induces dedifferentiation of the cells of the explanted tissue of a period of 1 to 6 days, to obtain a dedifferentiating or dedifferentiated cultured immature tissue;

ii) contacting the dedifferentiating or dedifferentiated cultured immature tissue with cells of *Agrobacterium* bacteria that in turn comprises a vector comprising at least one virulence gene of a Ti plasmid, a left T-DNA border, a right T-DNA border and a polynucleotide of interest located between the left T-DNA border and the right T-DNA border;

thereby obtaining a transformed plant tissue.

32. (New) The method of claim 31, wherein the immature tissue is an immature embryo tissue.

33. (New) The method of claim 31 or 32, wherein the plant is one from the family *Gramineae*.

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cont.

34. (New) The method of 33 wherein the plant is a rice plant.--
